

# The Effects of Accounting Expertise of Board Committees on the Short- and Long-Term Consequences of Financial Restatements

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## Abstract

Using financial restatements as the contextual setting, we examine whether the accounting expertise of board committees affects the consequences of financial reporting quality. We analyze both short-term consequences—stock market reactions surrounding restatement announcements, and long-term consequences—the incidence of Securities and Exchange Commission (SEC) Accounting and Auditing Enforcement Actions (AAERs), and CEO and CFO turnover after restatements. Our results show that the presence of audit committee members with accounting expertise moderates the consequences of restatements, resulting in less negative stock market reactions and a lower probability of CEO turnover. In contrast, the audit committee's nonaccounting financial expertise increases the likelihood of AAERs. For the compensation committee, we find that accounting expertise reduces the probability of CEO turnover, while nonaccounting financial expertise exacerbates the negative stock returns around restatement announcements and increases the probability of AAER. In the post-Sarbanes-Oxley Act (SOX) period, restatements have resulted in less severe consequences as companies have increased their propensity to hire accounting experts on the board. Correspondingly, we document that the moderating effects of accounting expertise become less significant, in part because the moderating effects are offset by the changed investor expectations. Overall, our results suggest that accounting expertise of board committees helps mitigate the negative consequences of restatements.

## Keywords

corporate governance, financial expertise, accounting expertise, audit committee, compensation committee, financial restatement

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## Introduction

The highly publicized accounting scandals of the last decade, such as Enron, Fannie Mae, and Lehman Brothers, and their far-reaching impact on financial markets have attracted attention from regulators and academics to the role of corporate boards (e.g., Guner et al., 2008; Securities and Exchange Commission [SEC], 2003). In a recent review of how boards of directors work, Adams et al. (2010) suggest that the expertise of board members and the role of committees are potential avenues for better understanding how boards influence corporate performance and financial reporting. Prior studies have found that the presence of accounting expertise in audit committees reduces the probability of material weakness in internal control (e.g., Hoitash et al., 2009) and financial restatements (e.g., Cohen et al., 2014; Plumlee & Yohn, 2010). This study aims to extend this literature by examining *whether* the accounting expertise of board committees mitigates the negative consequences of financial restatements. Specifically, we examine whether accounting expertise, in comparison with nonaccounting financial expertise, of audit and compensation committees affects the consequences of financial restatements. We focus on both the short-term stock market response to restatement announcements and three long-term consequences of restatements: (a) postrestatement SEC's Accounting and Auditing Enforcement Actions (AAERs); (b) CEO turnover in the 2 years after restatement announcements; and (c) CFO turnover in the 2 years after restatement announcements.

Our research question is motivated by recent debate among academics and practitioners on the definition of financial experts on board committees (Dhaliwal et al., 2010; Erkens & Bonner, 2013). In 2003, the SEC adopted rules implementing section 407 of the Sarbanes–Oxley Act of 2002 (SOX), requiring a public company to disclose whether at least one audit committee financial expert serves on its audit committee or to disclose the reason for not having such an expert. There are two competing views on the definition of financial experts. The narrow definition only includes those who have experience in preparing or auditing financial statements (accounting experts). The broad definition also includes individuals like CEOs and Presidents who have experience in supervising or assessing the application of accounting principles (nonaccounting financial experts). High-profile cases of accounting scandals such as Enron and WorldCom have highlighted that nonaccounting financial experts on audit committees do not necessarily have expertise to ask tough accounting questions of a company's management and auditors. On the other hand, accounting experts on these committees can better inform the board about whether managerial mistakes or accounting complexity are responsible for restatements (Peterson, 2012). Hence, it is important to understand the differential effects of accounting and nonaccounting financial expertise of board committees.

The primary theoretical argument underlying our research question is that corporate governance, especially directors' expertise, influences the quality of financial reporting and associated consequences (Caskey & Laux, 2017; Cohen et al., 2004; Dechow et al., 2010). We rely on the existing analytical and empirical literature to develop our theory. Some theoretical papers have modeled the relationship between corporate boards and financial reporting (e.g., Caskey et al., 2010; Caskey & Laux, 2017; Laux & Laux, 2009). Of particular interest is Caskey et al. (2010), whose analytical model predicts that, when audit committee monitoring is more effective, the penalty on misreporting is less severe. Some empirical papers draw on theories similar to Caskey et al. (2010) and argue that increased monitoring capability of the board of directors limits the ability of management to manipulate earnings. As a result, corporate governance will improve the financial reporting quality

and consequences thereof, such as cost of capital, informativeness of earnings announcement and likelihood of SEC enforcement actions (e.g., Johnson et al., 2009; Vafeas, 2000).

As far as board committee expertise is concerned, existing empirical evidence suggests that (a) directors' individual knowledge and skills are important for overall board performance (Forbes & Milliken, 1999) and (b) investors perceive audit committee accounting expertise as favorable and that the stock market reacts positively to firms appointing accounting experts to the audit committee (DeFond et al., 2005). Consistent with these empirical studies, analytical models in a number of theory papers (e.g., Caskey et al., 2010; Caskey & Laux, 2017; Laux & Laux, 2009) assume that audit and compensation committee members have high levels of accounting expertise to monitor or pre-audit financial statements. Otherwise, the board committees cannot detect management's manipulation and/or undo the bias in financial reporting. In effect, these studies suggest that an effective board committee must include accounting experts, rather than just financial experts as broadly defined by the SEC in 2003.

Based on the above theoretical and empirical literature, we argue that the accounting expertise of board committee members has a moderating influence on the consequences of financial reporting, in particular restatements. Similar to the arguments that the *type* and *materiality* of restatements affect its consequences, we hypothesize that the variation in the market reaction and other restatement consequences is impacted by the *type* of expertise that board committee members possess (e.g., accounting vs. nonaccounting) in addition to the *type* and *materiality* of the restatement itself.

We test our hypotheses using a combination of two sets of restatement data: one from the Government Accountability Office (GAO, 2006) that covers financial restatements from 1997 to 2005, and another from Audit Analytics that covers years from 2005 to 2014. Hence, our analysis is conducted over the sample period 1997 to 2014. We find that the negative stock returns around restatement announcements are significantly less severe for firms with accounting experts on the audit committee while more severe for firms with a higher proportion of nonaccounting financial experts. This moderating effect becomes statistically insignificant when accounting and nonaccounting financial expertise are bundled together. Furthermore, our results show that the presence of accounting expertise on the audit committee reduces the likelihood of CEO turnover. In contrast, nonaccounting financial expertise is positively related to the probability of SEC AAER.

Similar to our findings on audit committee, we find that compensation committee accounting expertise reduces the likelihood of SEC AAER and CEO turnover. On the other hand, negative stock returns around restatement announcements are exacerbated in firms with a higher percentage of nonaccounting financial expertise. Also, the likelihood of an SEC AAER is positively related to compensation committee's nonaccounting financial expertise. These results suggest that accounting experts on compensation committees can differentiate between whether the CEO or the complexity of the accounting issues are responsible for the restatements. They can then pass that information to the board and reduce the likelihood of CEO turnover.

Audit committee members have been subject to greater scrutiny in the post-SOX era. We therefore compare results from pre-SOX era to those in the post-SOX era.<sup>1</sup> We add a dummy variable (SOX) to indicate post-SOX era and interact it with our accounting expertise variable. We find that while in pre-SOX era our main results still hold, the moderating effects of accounting experts become statistically insignificant in post-SOX era. This could be attributable to two reasons. First, the market reaction to restatements became less negative in the post-SOX era. As a result, the cross-sectional variation across sample firms

declines. Second, the market's expectation of the composition of audit committees has changed. It has become a new norm for companies to hire "financial experts" because the SEC rule effectively mandates a financial expert on the audit committee and many of these financial experts are also accounting experts. Investors incorporate this in their pricing, and when restatements still occur, the negative market response is likely to be worse because investors do not expect restatements in the presence of accounting experts.<sup>2</sup> This changed expectation offsets the potential moderating influence of accounting experts. Hence, it is empirically more difficult to detect the moderating effects of accounting expertise in the post-SOX era. In sum, we interpret the statistically insignificant results for the post-SOX period as being consistent with the notion that the changed investor expectations in the post-SOX period offset the mitigating effects of accounting expertise.

Overall, we find that accounting versus nonaccounting financial expertise of board committees differentially affect both the short- and long-term consequences of financial restatements. Specifically, accounting expertise mitigates the negative consequences of restatements in most cases, while the presence of nonaccounting financial experts on board committees exacerbates the negative consequences of restatements. More importantly, these results still hold after controlling for the *type* and *materiality* of restatements.

Our study makes the following contributions to the literature. First, we contribute to the growing literature on board expertise (e.g., Cohen et al., 2014; Guner et al., 2008). Prior studies have mainly examined the role of accounting and financial experts on the audit committee (DeFond et al., 2005; Dhaliwal et al., 2010; Krishnan & Visvanathan, 2009). However, while the compensation committee plays an important role in monitoring and creating incentives for managerial performance, there is no evidence on the importance of accounting expertise on the compensation committee. Hence we examine the role of financial expertise in compensation committees, in addition to the audit committee, and show that accounting experts on compensation committees help mitigate the negative consequences for CEOs after restatements.

Second, some studies document the importance of decomposing the broad definition of financial expertise into two specific types of financial expertise, that is, accounting and nonaccounting (e.g., Abbott et al., 2004; Krishnan & Visvanathan, 2009). We complement these prior studies by confirming the importance of such decomposition. However, distinct from prior studies, we document that accounting (nonaccounting) expertise in both audit and compensation committees have a moderating effect by weakening (exacerbating) the negative market reaction to restatements. This is an important new insight. Moreover, our empirical results complement the analytical papers (e.g., Caskey et al., 2010; Caskey & Laux, 2017) by validating their theoretical predictions and by providing a better understanding of the role of board committees in financial reporting in the presence or absence of accounting expertise.

Finally, we contribute to the literature on restatements. Prior studies on the relationship between audit committee expertise and financial reporting quality primarily focus on the likelihood of restatements (Abbott et al., 2004; Schmidt & Wilkins, 2013). In contrast, we examine the *consequences* of financial restatements. Moreover, we complement prior studies that have examined the consequences of restatements (e.g., Palmrose et al., 2004; Palmrose & Scholz, 2004) but have not examined the influence of financial expertise of board committees.

The remainder of this article is organized as follows. The next section reviews prior literature and develops hypotheses. The Section on "Data, Sample Selection, and Measurement of Variables" discusses the sample data and the research methodology. The

“Results” presents the empirical results. The final section concludes and discusses the limitations of the study.

## **Literature Review and Hypothesis Development**

Our primary theoretical rationale for why accounting expertise of board committees affects restatement consequences is that corporate governance affects not only financial reporting quality but also consequences of financial reporting. Boards of directors, auditors, and the management team together influence the outcome of financial reporting (e.g., Bushman & Smith, 2001). Some empirical papers find that corporate governance improves the financial reporting quality and consequences thereof, such as cost of capital, informativeness of earnings announcement, and SEC enforcement actions. For instance, Vafeas (2000) find that earnings are more informative in firms with small boards. Johnson et al. (2009) find that excessive executive incentive, a proxy for weak corporate governance, is related to higher probability of SEC AAER. Below, we review relevant literature on board financial expertise and restatement consequences and develop our hypotheses.

### *Accounting and Nonaccounting Financial Expertise of Boards of Directors*

The SOX Act of 2002 requires SEC to consider whether a person has these four attributes in defining the term “financial expert”: (a) an understanding of generally accepted accounting principles and financial statements; (b) experience in the preparation or auditing of financial statements of generally comparable issuers and the application of such principles in connection with the accounting for estimates, accruals, and reserves; (c) experience with internal accounting controls; and (d) an understanding of audit committee functions. Following these requirements, SEC (2002) initially defines audit committee financial experts in a narrow way, which essentially only include a person who has been a public accountant, auditor, principal financial officer, controller, or principal accounting officer. Facing fierce resistance from registrants, SEC (2003) defines the term “financial expert” as a director with either accounting experience or experience in supervising or assessing financial reporting.<sup>3</sup> This definition allows for a wide array of individuals to qualify as financial experts—in particular, CEOs and presidents—and has thus generated debate and controversy (Erkens & Bonner, 2013). However, given the relatively short time that boards and audit committees spend reviewing a company’s financial statements and controls, it is not clear that members with nonaccounting expertise can discover accounting irregularities (Abbott et al., 2004; Krishnan & Visvanathan, 2009). We conjecture that different definitions of who qualifies as a financial expert are likely to provide differential benefits for corporate governance.

### *Consequences of Financial Restatements*

Scholz (2008) provides a comprehensive list of consequences of financial restatements. The most widely documented immediate consequence is market reaction to the announcement. Palmrose et al. (2004) use a sample of 403 restatements of quarterly and annual financial statements announced from 1995 through 1999, and find a significant mean (median) abnormal return of about  $-9.2\%$  ( $-4.6\%$ ) around restatement announcements. A second consequence of a financial restatement is an SEC enforcement action (AAER) and shareholder litigation. AAER is a commonly used measure of financial fraud or accounting

irregularity (Hennes et al., 2008; Leone & Liu, 2010). Palmrose and Scholz (2004) examine the legal consequences of financial restatements. They find that restatements involving core earnings accounts (e.g., revenue and expense) lead to more shareholder litigation. A third consequence of financial restatement is top management turnover, including CEO turnover and CFO turnover. Since the CEO/CFO has fiduciary responsibility for managing the company and reporting its financial performance to shareholders, many studies have examined CEO/CFO turnover after restatements. Peterson (2012), for example, examines how revenue recognition complexity moderates the consequences of restatements such as CEO turnover. Desai et al. (2006) also find that over half of restatement firms replace at least one top manager within two years of the restatement announcement date. Other studies examine the moderating effects of contextual factors on CEO/CFO turnover in restatement firms (e.g., Hennes et al., 2008; Leone & Liu, 2010).

### *Audit Committee Accounting Expertise and Restatement Consequences*

While auditors are responsible for discovering accounting issues and questioning suspicious accounting methods, audit committees also work with both external and internal auditors to ensure the company's financial reporting policy is consistent with Generally Accepted Accounting Principles (GAAP) and SEC rules. Prior research has shown that audit committee accounting expertise is associated with high-quality financial reporting.<sup>4</sup> DeFond et al. (2005) investigate investor perceptions of audit committee accounting expertise and find that the market reacts positively to firms appointing accounting experts to the audit committee. Similarly, Coates et al. (2007) find that not all financial experts, as defined by SEC (2003), can understand the complexities and details of financial accounting. That is, financial literacy does not necessarily imply accounting literacy. According to Erkens and Bonner (2013), accounting experts, such as CFOs and retired audit partners, have the necessary expertise to monitor and facilitate financial reporting. In addition, they have been trained in accounting ethics, have had to adhere to a code of ethics, and should have a strong sense of accountability, given the nature of the professional standards they must follow. Furthermore, anecdotal evidence suggests that, because of their training and job requirements, both retired auditors and CFOs would have the ability to ask tough questions about accounting choices (Lindorff, 2003).<sup>5</sup>

In contrast, nonaccounting financial experts may not have the same qualities as accounting experts. While CEOs and presidents have knowledge of GAAP, through experience supervising or assessing the performance of accountants and auditors (SEC, 2003), one can argue that nonaccounting financial experts are less effective in performing their role within audit committees. For instance, DeFond et al. (2005) find that, although the SEC allows presidents and CEOs to be categorized as financial experts, the market responds more positively to the appointment of accounting experts than to the appointment of top executives without accounting backgrounds. In addition, the presence of individuals with nonaccounting backgrounds who are designated as "financial experts" is not related to accounting conservatism (Krishnan & Visvanathan, 2008) or accruals quality (Dhaliwal et al., 2010).

In analytical papers that study the roles of board committees in financial reporting, researchers usually assume a financial reporting process involving management, auditors, and board committees. Laux and Laux (2009) assume that compensation committees set CEO incentive pay and audit committees monitor financial reporting. As the compensation committee increases the link between CEO pay and performance, the audit committee will increase its oversight intensity. They argue that a more powerful incentive package will not

necessarily increase the magnitude of earnings management if audit committee monitoring is high. Caskey et al. (2010) model a financial reporting process in which management first reports to the audit committee and then the audit committee modifies the management's report by removing management bias. Their model predicts that when audit committee monitoring is more effective, the penalty on misreporting is less severe. Caskey and Laux (2017) develop a model in which an empire-building manager wants to manipulate accounting information that a board uses to approve or disapprove an investment decision. They find that effective monitoring by board committees curtails managerial manipulation of accounting reports and consequently leads to an optimal level of conservatism in corporate financial reporting.

A common assumption in all of these analytical papers is that audit committee or compensation committee members have high levels of accounting expertise to monitor or pre-audit financial statements. Otherwise, these committees could not detect management's manipulation of earnings and remove the bias in the financial reports. In effect, these studies suggest that, for board committees to be effective, they must include accounting experts, rather than just financial experts, as broadly defined by the SEC in 2003.

While prior studies have examined the audit committee financial expertise on earnings management and financial restatement, little is known about the audit committee's involvement in the remediation of financial restatements. Still, numerous companies refer to audit committee involvement in restatement investigation and remediation.<sup>6</sup> Anecdotal evidence suggests that audit committees often take the lead in restatement investigation and remediation (Hoffman & Rockoff, 2014). In some cases, auditors have failed to detect earnings manipulation but audit committees found the error.<sup>7</sup> We review empirical academic and practitioner literature on the accounting expertise of audit committees and financial restatement. We argue that the presence of accounting experts on the audit committee mitigates the negative consequences of restatements in five ways.

First, a high level of accounting knowledge and experience are needed to monitor the reporting of complex accounting issues, such as revenue recognition and business combinations (Dhaliwal et al., 2010). We expect that restatements in companies with accounting experts will only involve one account, rather than several, or only involve peripheral accounting issues such as misclassification. In these cases, users will consider the accounting error an isolated issue, rather than pervasive financial fraud. This kind of restatement will have minor or no impact on earnings and is often not considered as severely misleading.

Second, accounting experts have experience with internal controls and reporting procedures and thus can enhance control over reporting, which, in turn, lowers the probability and severity of accounting errors. Hoitash et al. (2009) find a lower likelihood of material weakness in internal control is associated with relatively more audit committee members having accounting experience. Therefore, accounting expertise on the audit committee will enhance internal control and reduce the severity of accounting errors. If investors, regulators, and other directors understand this chain of conditions, their reactions to restatements will be less negative when accounting experts are on the audit committee.

Third, materiality of accounting errors can be judged from qualitative and quantitative perspectives (Scholz, 2014). Accounting experts are often conservative. They thus may initiate restatements even when the qualitative and quantitative aspects of errors are not as material as those in companies without accounting experts on their audit committees. For instance, an error that has minor impact on earnings may be judged by accounting experts as deserving a restatement because they also consider the qualitative and circumstantial

factors. In contrast, nonaccounting experts may only look at the quantitative aspects of an accounting error and decide not to restate.

Fourth, in most cases, boards of directors manage restatement investigations and announcements, with audit committee members taking the leadership role (Marciukaityte et al., 2009). It requires considerable force of argument and the right accounting rhetoric to differentiate between serious restatements due to accounting irregularities and less serious restatements due to simple accounting errors. Therefore, the ability of boards to communicate in a timely and proper manner the nuances of a restatement is a crucial driver of its consequences (Badertscher & Burks, 2011). Accounting experts on the audit committee are likely to be better than non-experts at communicating with investors, regulators, and analysts about the causes and severity of the financial restatements. Effective communication may result in a less negative market reaction and a lower the probability of the SEC issuing an AAER. If the market understands this, there will be less pressure for the CEO to resign or be replaced.

Fifth, if stakeholders understand the roles of accounting experts in mitigating restatement severity, then investors are likely to react less negatively to, and the SEC less likely to take enforcement actions against, restatements in the presence of audit committee accounting experts. Also, accounting experts are more likely to communicate better with other board members regarding the causes of restatements. Therefore, the board is likely to be more tolerant of accounting errors and hence less likely to dismiss the CEO and CFO because of the restatements.

In sum, we expect that negative consequences will be less severe in companies with accounting experts on audit committees than those without accounting experts.<sup>8</sup>

**Hypothesis 1a:** The number of accounting experts on audit committees is not associated with the market reaction to restatement announcements.

**Hypothesis 1b:** The number of accounting experts on audit committees is not associated with the probability of restatements that are subject to SEC AAERs.

**Hypothesis 1c:** The number of accounting experts on audit committees is not associated with the probability of CEO turnover.

**Hypothesis 1d:** The number of accounting experts on audit committees is not associated with the probability of CFO turnover.

It is noteworthy that analytical models by Caskey et al. (2010) predict that, when audit committee monitoring is better, the penalty on misreporting will be less severe. Our hypotheses that, if audit committee members have accounting expertise to challenge managers' representation of financial performance and position, then the penalty on misreporting (negative stock market reaction, SEC AAER, or CEO/CFO turnover) would be less severe, is consistent with this prediction. In this spirit, our study provides a direct test of the prediction of Caskey et al. (2010).

### *Compensation Committee Accounting Expertise and Restatement Consequences*

Fraudulent reporting typically starts with top executives (Larcker et al., 2007). Many studies have found that senior managers, such as CEOs and CFOs, are likely to have some level of involvement in accounting frauds (e.g., Jiang et al., 2010). According to Beasley et al. (2010), 72% and 65% of fraudulent reporting cases involved CEOs and CFOs, respectively. One potential reason for this top management involvement is their performance



incentives (Jiang et al., 2010; Larcker et al., 2007). Top managers usually receive compensation that is closely linked with financial measures, such as net income, EPS, and return on assets (Murphy, 1999). Academic studies suggest that financial performance-based compensation provides incentives for executives to manage earnings to maximize bonus payments or stock market gains (Cheng & Warfield, 2005; Jiang et al., 2010). The desire to increase one's compensation is one of the most commonly cited motivations for financial misreporting. Therefore, reducing the risk of senior management involvement in financial statement fraud requires oversight of not only financial reporting but also executive incentives (Jensen et al., 2004). The SEC and Public Company Accounting Oversight Board (PCAOB), for their part, have expressed concerns that incentives in management compensation packages will lead managers to misreport or even commit financial fraud. Therefore, PCAOB (2014) issued Auditing Standard No. 18, which requires auditors to carefully review executive compensation plans that may pose an increased risk of material misstatement in financial statements.

The role of the compensation committee is to choose a mix of incentive components, set ex ante performance standards, evaluate management performance ex post, and determine compensation. Compensation committees must strike a balance between short-term and long-term incentives to reduce the temptation of financial fraud (Laux & Laux, 2009). If compensation committees understand the pros and cons of performance measures and executive incentives as well as the level of risk inherent in a particular business, then they can better strike a balance among the various incentives and monitor compensation plans' effectiveness in rewarding executive performance. Performance-based bonuses and stock awards, for example, are a potential mechanism via which compensation committees alleviate conflicts of interest between managers and shareholders (Murphy, 1999). However, these incentives may also induce managers to manipulate earnings (Cheng & Warfield, 2005; Jiang et al., 2010). So the compensation committee must balance the risk of misreporting with the benefit of giving management incentives to grow the company. Accounting experts on the compensation committee can better assess these risks. Thus, their presence is likely to contribute to a better-designed executive compensation contract and a more objective evaluation of executive performance.

Hsu and Liao (2012) find that compensation committees adjust CEO/CFO compensation in relation to the internal control weakness and that the adjustment is more pronounced in firms with more financial expertise on their compensation committees. In our context, a compensation committee with greater accounting and financial expertise may be better able to include performance measures that will not motivate managers to manipulate earnings. Actually, compensation committees often change performance measures to provide weak incentives for earnings manipulation on an annual basis. Huang et al. (2013) use panel data of performance measures to detect the variation in performance measures over time. Using data from 2006 to 2011, they find that about 50% of companies change their bonus plan performance measures from year after year.

Also, accounting expertise can increase the quality of monitoring of management performance and detect areas prone to financial manipulation. In anticipation of the significant accounting expertise on the compensation committee, managers will be thwarted to misreport financial information. The preceding arguments suggest that accounting experts on the compensation committee will mitigate the negative consequences of financial restatements. Our hypotheses stated in the null form are as follows:

**Hypothesis 2a:** The number of accounting experts on compensation committees is not associated with the market reaction to restatement announcements.

**Hypothesis 2b:** The number of accounting experts on compensation committees is not associated with the probability of restatements that are subject to SEC AAERs.

**Hypothesis 2c:** The number of accounting experts on compensation committees is not associated with the probability of CEO turnover.

**Hypothesis 2d:** The number of accounting experts on compensation committees is not associated with the probability of CFO turnover.

## Data, Sample Selection, and Measurement of Variables

### Sample Selection

We identify restatements using two data sets: one from the GAO (2006) that covers financial restatements for the period 1997 through 2005, and the other from Audit Analytics that covers years 2005 through 2014. For companies that have filed restatement more than once during the sample period, we retain the first restatement filed. We hand collected data on board committees for the sample firms from their proxy statements filed with the SEC. We obtain company financial data from Compustat and stock returns data from the Center for Research in Security Prices. CEO and CFO turnover data were obtained from ExecuComp for the later sample period (2005–2014), while for the earlier sample period (1997–2005), we hand collected the data. We identify AAERs in relation to the restatements from the SEC's AAER database. Our final sample includes 1,522 observations for the period 1997 through 2014.<sup>9</sup> Table 1 Panel A provides a description of the sampling process while Panel B displays the sample distribution over time. The number of restatements peaked in 2005, with 306 restatements constituting 20.1% of our sample. Table 1 Panel C presents the industry composition of the sample across the Fama and French 12 industries. Business equipment has the most restatements (338, or 22.3%), followed by wholesale and retail (13.5%) and construction and other (13.4%).

### Variable Measurement

The first dependent variable is cumulative abnormal stock returns (*CAR*) around restatement announcements. *CAR* is measured as the firm's cumulative stock return over the 11-day event window (5 days before through 5 days after the announcements) minus a normal return calculated using the market model, that is,  $\alpha + \beta \times \text{Market Return}$ , where  $\alpha$  and  $\beta$  for each firm are estimated using daily returns over a 1-year period ending 30 days before the restatement announcements.<sup>10,11</sup> The second dependent variable is the indicator variable *AAER*, which is set to be 1 if a company is subject to SEC enforcement action and 0 otherwise. CEO turnover (*CEOTURN*) and CFO turnover (*CFOTURN*) are defined as an indicator variable equal to 1 if the company experienced CEO/CFO turnover in the year of its restatement announcement or in the following year and 0 otherwise.

Audit committee membership data for each company was gathered from proxy statements using a global database known as Morningstar Document Research. Proxy statements issued a year before the restatement date were used to collect detailed background information on each board member including work history, position titles, and committee structure. Each board member on the audit and compensation committee was identified as either

**Table I.** Sampling Process and Sample Distribution.

## Panel A: Sampling Process.

Sampling steps	GAO data 1997–2005	Audit analytics data 2005–2014	Combined sample 1997–2014
All restatements examined	1,607	1,313	2,920
<i>Less repeated restatements by the same firm</i>	–413	–451	–864
First-time restatements	1,194	862	2,056
<i>Less restatements with missing proxy statements</i>	–296	0	–296
<i>Less restatements with missing variables</i>	–81	–157	–238
Sample size	817	705	1,522
Restatements subject to AAERs	144	23	167
Restatements not subject to AAERs	673	682	1,355

Note. This table summarizes the sampling selection process in this study. AAERs = Accounting and Auditing Enforcement Actions; GAO = Government Accountability Office.

## Panel B: Sample Distribution by Restatement Year.

Year	N	%
1997	16	1.05
1998	28	1.84
1999	50	3.29
2000	65	4.27
2001	85	5.58
2002	126	8.28
2003	118	7.75
2004	146	9.59
2005	306	20.11
2006	114	7.49
2007	57	3.75
2008	49	3.22
2009	50	3.29
2010	50	3.29
2011	44	2.89
2012	72	4.73
2013	72	4.73
2014	74	4.86

## Panel C: Sample Distribution Across Industries.

Industry	N	%
Consumer nondurables	76	5
Consumer durables	38	2.5
Manufacturing	178	11.72
Basic materials	44	2.9
Chemicals	35	2.3
Business equipment	338	22.25
Telecommunications	49	3.23
Utilities	55	3.62
Wholesale and retail	205	13.5
Healthcare and medical	104	6.85
Finance	196	12.9
Construction and other	204	13.4

Note. Industry is defined as the Fama and French 12 industries.

having accounting financial expertise or nonaccounting financial expertise. Accounting financial expertise was defined as someone who had experience as a public accountant, auditor, principal financial officer, or controller. The nonaccounting financial experts in this study include CEOs, presidents, finance professors, financial analysts, and venture capitalists. We code a board member as either an accounting expert or a nonaccounting expert in an exclusive way. In addition, since accounting expertise is our main focus, we give priority to accounting expertise during the coding process. That is, if a board committee member has both accounting and nonaccounting expertise, we code the member as accounting expert.<sup>12</sup> After identifying directors on the audit and compensation committee with accounting expertise, we calculate, as in Hoitash et al. (2009), the percentages of committee members with accounting expertise and code them as *AUDITACC* and *COMPACC*, respectively. Similarly, we define nonaccounting expertise, *AUDITNONACC* and *COMPNONACC*, as percentages of nonaccounting financial experts on the audit committee and compensation committee respectively. By adding up the number of accounting and nonaccounting financial experts, we obtain audit committee's financial experts (*AUDITFIN*) and compensation committee's financial experts (*COMPFIN*). The remaining directors are nonfinancial experts, which may include COOs, CTOs, general counsels, and other top management positions that have no direct involvement with accounting or finance.

### Control Variables

Following existing literature, we control for corporate governance variables in our analyses. We use a dummy variable to record an existence (value of 1) or absence (value of 0) of CEO duality denoted by *CEO\_CHAIR*. CEO duality can have significant control and influence over the board. CEOs serving as chairmen have power over the selection of candidates on the board and may appoint directors who are not independent of management. Therefore, CEO duality is expected to be positively associated with incidence of AAERs. Other variables also measured in this study include board and committee size. *BOARD\_SIZE* is defined as the total number of directors. Uzun et al. (2004) observed a positive relationship between board size and fraudulent reporting. Uzun et al. (2004) and other prior studies have also argued that the board's effectiveness in monitoring of fraud depends on committee sizes. *AUDIT\_SIZE* and *COMP\_SIZE* are defined as the total number of directors on the audit and compensation committees, respectively. Large committees are expected to decrease the effectiveness of oversight and increase the likelihood of fraudulent financial reporting.

We also control for restatement types. Following Palmrose and Scholz (2004), we classify restatements into core and noncore. Restatements of revenues and expenses are considered core. All others are noncore. The dummy variable, *CORE*, is set to be 1 if a restatement is a core restatement and 0 otherwise. We also control for who initiated the restatements. If the company initiated it, the variable *SELF* is set to be 1 and 0 otherwise. We control for the severity of the restatement with three variables: (a) *IMPACT*, calculated as |(cumulative effect of restatements/number of years in restatement period)/prior period total assets|; (b) *PERVASIVENESS*, measured as the number of accounts affected; and (c) *PERSISTENCY*, measured as the number of years involved in the restatement. When examining CEO and CFO turnover, we also include *AAER* as another control variable, as the SEC enforcement action may have direct a direct effect on management turnover.

In addition, we control for firm characteristics such as size (proxied by sales), profitability, and book-to-market (BTM) ratio that have been shown to influence restatement

consequences. Previous studies have also shown that past operating performance is associated with incidence of fraudulent reporting and CEO turnover (e.g., Leone & Liu, 2010). Lee et al. (2006) examine the relationship between growth and restatements and find mixed results. We therefore also control for growth opportunity by including BTM ratio as an additional control variable. The effect of board accounting expertise on the consequences of restatement may be moderated by or be a function of the effect of the board's accounting expertise on the firm's overall financial reporting quality.<sup>13</sup> To control for this potential omitted variable, we include in our regression models a proxy for the overall financial reporting quality. Specifically, following Kothari et al. (2005), we use performance-matched discretionary accruals, *DACCR*, as our measure of financial reporting quality.

### Empirical Model Specifications

We use the following regression specifications to analyze the effect of audit committee accounting and nonaccounting expertise:

$$\begin{aligned}
 \text{Restatement Consequence} = & \beta_0 + \beta_1 \text{AUDITACC} + \beta_2 \text{AUDITNONACC} \\
 & + \beta_3 \text{AUDIT\_SIZE} + \beta_4 \text{BOARD\_SIZE} + \beta_5 \text{CEO\_CHAIR} + \beta_6 \text{SELF} \\
 & + \beta_7 \text{CORE} + \beta_8 \text{IMPACT} + \beta_9 \text{PERVASIVENESS} + \beta_{10} \text{PERSISTENCY} \\
 & + \beta_{11} \text{SIZE} + \beta_{12} \text{BTM} + \beta_{13} \text{ROA} + \beta_{14} \text{DACC}
 \end{aligned} \tag{1}$$

where *Restatement Consequence* is measured as *CAR*, *AAER*, *CEOTURN*, and *CFOTURN*, respectively. *CAR* is cumulative abnormal stock return around restatement announcement in the period of  $(-5, + 5)$ ; *AAER* is a dummy variable indicating whether a restatement firm is subject to SEC AAERs; *CEOTURN* is equal to 1 if the company experienced CEO turnover in the year of restatement announcement or in the following year and 0 otherwise; *CFOTURN* is equal to 1 if the company experienced CFO turnover in the year of restatement announcement or in the following year and 0 otherwise; *AUDITACC* is the percentage of audit committee members with accounting expertise; *AUDITNONACC* is the percentage of audit committee members with nonaccounting financial expertise; *AUDIT\_SIZE* is the size of audit committee; *BOARD\_SIZE* is the size of board of directors; *CEO\_CHAIR* is a dummy variable indicating whether a CEO is also chairman of the board of directors; *SELF* is a dummy variable indicating whether the company itself initiated the restatement; *CORE* is a dummy variable indicating if the restatements involve revenue and cost/expense; *IMPACT* is the financial statement impact of the restatement, calculated as  $|(cumulative\ effect\ of\ restatements/number\ of\ years\ restated)|$  divided by prior period total assets; *PERVASIVENESS* is measured as the number of accounts affected; *PERSISTENCY* is measured as the number of years involved in the restatement; *SIZE* is logarithm of sales; *BTM* is the book-to-market ratio measured as of the end of the previous fiscal year; *ROA* is return on assets calculated as earnings before extraordinary items divided by total assets; *DACCR* is performance-matched discretionary accruals calculated following Kothari et al. (2005). We use ordinary least squares (OLS) to estimate specifications using *CAR* as the dependent variable and logistic regressions for the other binary-dependent variables.

For compensation committee, we use the same specification as in Model (1) except that the independent variable is compensation committee expertise in lieu of audit committee expertise. We also use variations of the models to investigate the effect of combined financial expertise on consequences of restatements.

## Results

### Descriptive Statistics

Table 2—Panel A presents the descriptive statistics of the final sample used in the analysis. *CAR* has a mean of  $-3.3\%$  and a median of  $-1.6\%$ , which suggests that overall the market reacts negatively to restatements.<sup>14</sup> *AAER* observations make up about 11% of the entire sample. *AUDITACC* has a mean of 0.186, indicating that less than 20% of audit committee members are accounting experts. *COMPACC* has a mean of 0.07, implying a much smaller representation of accounting experts on the compensation committee. *CEOTURN* has a mean of 0.273, which shows that more than a quarter of all the restatement firms have a CEO turnover within 2 years after restatement announcements. *CFOTURN* averages 0.308, slightly higher than *CEOTURN*.

Table 2 Panel B presents the Pearson (Spearman) correlation coefficients among the key variables used in the regression above (lower) the diagonal. The Pearson correlation coefficient between *AAER* and *CAR* is  $-0.20$ , representing a significant negative return if a restatement is later subject to an *AAER*. *CAR* is positively correlated with accounting expertise of both audit and compensation committee but negatively correlated with nonaccounting expertise on the two board committees. *AAER* is negatively correlated with the number of accounting experts on audit committees but insignificantly negatively correlated with the number of accounting experts on compensation committees. *CEOTURN* is negatively correlated with the number of accounting experts on both the audit and compensation committee, while the correlations between *CFOTURN* and accounting expertise on the two board committees are statistically insignificant.

### Audit Committee Expertise and Consequences of Restatements

Table 3 presents regression results on restatement consequences, using the following variations of Model 1 as specified in section “Empirical Model Specifications”:

$$\begin{aligned} \text{Restatement Consequence} = & \beta_0 + \beta_1 \text{AUDITACC} + \beta_2 \text{AUDITNONACC} \\ & + \beta_3 \text{AUDIT\_SIZE} + \beta_4 \text{BOARD\_SIZE} + \beta_5 \text{CEO\_CHAIR} + \beta_6 \text{SELF} + \beta_7 \text{CORE} \\ & + \beta_8 \text{IMPACT} + \beta_9 \text{PERVASIVENESS} + \beta_{10} \text{PERSISTENCY} + \beta_{11} \text{SIZE} \\ & + \beta_{12} \text{BTM} + \beta_{13} \text{ROA} + \beta_{14} \text{DACCR} \end{aligned} \quad (1.1)$$

$$\begin{aligned} \text{Restatement Consequence} = & \beta_0 + \beta_1 \text{AUDITFIN} + \beta_2 \text{AUDIT\_SIZE} \\ & + \beta_3 \text{BOARD\_SIZE} + \beta_4 \text{CEO\_CHAIR} + \beta_5 \text{SELF} + \beta_6 \text{CORE} + \beta_7 \text{IMPACT} \\ & + \beta_8 \text{PERVASIVENESS} + \beta_9 \text{PERSISTENCY} + \beta_{10} \text{SIZE} + \beta_{11} \text{BTM} \\ & + \beta_{12} \text{ROA} + \beta_{13} \text{DACCR} \end{aligned} \quad (1.2)$$

Model 1.1 examines accounting expertise and nonaccounting financial expertise on audit committees directly, while Model 1.2 looks at total financial expertise. In addition to audit committee characteristics, we also include governance and restatement variables as well as controls for size, BTM, and profitability. Size, BTM, and profitability are calculated using financial statement and market information from the previous fiscal year. All of the independent variables are observable prior to the restatement announcements.

**Table 2.**

Panel A: Descriptive Statistics.

Variable	M	SD	Lower quartile	Median	Upper quartile
CAR	-0.033	0.153	-0.079	-0.016	0.033
AAER	0.110	0.313	0.000	0.000	0.000
CEOTURN	0.273	0.446	0.000	0.000	1.000
CFOTURN	0.308	0.462	0.000	0.000	1.000
AUDITACC	0.186	0.224	0.000	0.000	0.333
AUDITNONACC	0.720	0.249	0.600	0.750	1.000
AUDITFIN	0.906	0.189	1.000	1.000	1.000
COMPACC	0.070	0.149	0.000	0.000	0.000
COMPNONACC	0.713	0.245	0.500	0.667	1.000
COMPFIN	0.782	0.243	0.667	0.857	1.000
AUDIT_SIZE	3.516	0.981	3.000	3.000	4.000
COMP_SIZE	3.430	1.117	3.000	3.000	4.000
BOARD_SIZE	8.477	2.526	7.000	8.000	10.000
CEO_CHAIR	0.587	0.493	0.000	1.000	1.000
SELF	0.438	0.496	0.000	0.000	1.000
CORE	0.614	0.487	0.000	1.000	1.000
IMPACT	0.004	0.013	0.000	0.000	0.001
PERVASIVENESS	1.951	1.604	1.000	1.000	2.000
PERSISTENCY	1.961	1.353	1.000	1.000	3.000
SIZE	6.311	2.041	5.058	6.349	7.569
BTM	0.616	0.571	0.279	0.500	0.803
ROA	-0.027	0.237	-0.020	0.023	0.065
DACCR	-0.005	0.090	-0.048	-0.001	0.037

Note. See Appendix for variable definitions.

(continued)

Columns (1) and (2) in Table 3 present the OLS results for *CAR*. In Column (1), the coefficient for accounting expertise on audit committees (*AUDITACC*) is 0.046, which is statistically greater than 0, indicating the market reacts positively, or less negatively, to restatements from firms whose audit committees include higher proportions of accounting experts. The coefficient for nonaccounting expertise, however, is negative and not significantly different from 0. This result rejects our null Hypothesis 1a. Audit committee size (*AUDIT\_SIZE*) also loads, suggesting that the market reacts positively or less negatively, to firms with larger audit committees. In Model 1.2, as shown in Column (2), we replace accounting expertise on audit committees (*AUDITACC*) and nonaccounting expertise on audit committees (*AUDITNONACC*) with total financial expertise on the audit committee (*AUDITFIN*). We find that the coefficient for total financial expertise on the audit committee (*AUDITFIN*) is not significantly different from 0. That is, without breaking down the financial expertise into accounting versus nonaccounting, we do not see a statistically significant relation between financial expertise and market reaction to restatement announcement.

Overall, the results in the first two columns in Table 3 suggest that the market reacts less negatively to restatements for firms with accounting experts on their audit committees.<sup>15</sup> At the same time, the market does not seem to distinguish between firms with low or high nonaccounting expertise or between those with low or high total financial expertise on the audit committee. These results are consistent with our expectation.

Table 2. (continued)

Panel B: Correlations.

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	
(1) CAR																								
(2) AAER	-.13																							
(3) CEOTURN	-.05	.18																						
(4) CFOTURN	-.10	.12	.20																					
(5) AUDITACC	.07	-.14	-.12	-.04																				
(6) AUDITNONACC	-.04	.18	.11	.03	-.67																			
(7) AUDITFIN	.01	.09	-.01	.01	.31	.44																		
(8) COMPACC	.01	-.05	-.10	-.02	.46	-.32	.10																	
(9) COMPNONACC	-.08	.22	.08	.05	-.21	.47	.38	-.25																
(10) COMPFIN	-.08	.21	.04	.04	.05	.28	.44	.31	.82															
(11) AUDIT_SIZE	.06	-.05	-.03	-.12	.00	-.06	-.18	-.01	-.20	-.23	.64	.50	.07	-.02	-.02	-.08	.06	.07	.43	.03	.16	.02		
(12) COMP_SIZE	.05	-.04	-.04	-.08	.01	-.03	-.09	.06	-.32	-.32	.60	.44	.04	-.03	-.03	-.08	.04	.05	.34	.04	.13	.00		
(13) BOARD_SIZE	.03	-.03	-.04	-.12	.04	-.09	-.12	-.05	-.20	-.26	.49	.45	.03	-.04	-.06	-.11	.06	.08	.53	-.02	.13	-.04		
(14) CEO_CHAIR	-.02	-.01	-.14	-.03	-.03	-.02	-.07	.03	-.02	.00	.06	.02	.02	.04	.00	-.02	-.03	-.01	.07	-.01	.03	.00		
(15) SELF	-.04	.10	.07	.03	-.10	.10	-.01	-.05	.13	.10	-.02	-.04	-.05	.04	.17	.07	.10	.06	-.06	-.06	-.01	.07		
(16) CORE	.00	.07	.04	.00	-.05	.01	-.04	-.07	.07	.04	-.03	-.02	-.05	.00	0.17	.09	.24	.10	-.04	-.07	-.01	.03		
(17) IMPACT	.00	.04	.04	.00	-.02	.03	.01	-.07	-.03	-.08	-.02	-.01	-.01	-.01	0.19	.24	.16	.07	-.19	-.07	-.19	-.05		
(18) PERVASIVENESS	.08	-.02	.01	-.01	-.04	.03	-.01	-.08	-.06	-.11	.07	.04	.07	-.03	.08	.25	.37	.38	.13	-.04	.04	-.01		
(19) PERSISTENCY	.09	.01	-.01	-.03	-.02	.02	-.01	-.06	-.09	-.13	.08	.05	.07	-.03	.03	.10	.36	.47	.17	-.05	.11	-.04		
(20) SIZE	.09	.01	-.03	-.12	.06	-.03	.00	-.05	-.14	-.19	0.45	.37	.57	.08	-.08	-.04	-.01	.15	.17	.00	.42	-.07		
(21) BTM	.03	-.03	.01	-.05	-.01	-.04	-.06	.04	-.07	-.05	.08	.10	.03	-.02	-.06	-.07	-.02	-.02	-.03	.04	-.01	.04		
(22) ROA	.07	-.11	-.15	-.07	.09	-.07	.01	.00	-.13	-.13	.11	.11	.14	.05	-.06	.01	.00	.09	0.12	.30	-.20	.12		
(23) DACCR	-.06	.03	.06	.03	-.06	.04	-.03	-.01	.01	.02	.02	-.02	-.03	-.01	.06	.04	-.04	-.01	-.04	-.03	.09	.03		

Note. Pearson (Spearman) correlation coefficients are presented above (below) the diagonal. Correlation coefficients with an absolute value greater than 0.05 are significant at the 5% level and those greater than 0.09 are significant at 1% level. See appendix for variable definitions.



Columns (3) and (4) of Table 3 present results from the logistic regression of *AAER* on audit committee characteristics. While we observe a negative, but statistically insignificant, relation between *AAERs* and accounting expertise of the audit committee (*AUDITACC*), nonaccounting financial expertise (*AUDITNONACC*) is positively related to *AAER*, which suggests that nonaccounting experts like CEOs and Presidents are associated with a higher probability of an SEC enforcement action related to a restatement. Column (4) shows a positive relation between total financial expertise (*AUDITFIN*) and *AAER*. The results also show that the probability of an *AAER* increases if a restatement involves a core account, such as revenues or expense, or if a restatement has larger impact on the financial statement. Moreover, larger firms, firms with more losses, firms with more positive discretionary accruals, are more likely to be subject to *AAERs*.

Columns (5) and (6) of Table 3 show the results of logistic regressions of CEO turnover on the accounting expertise of audit committees, nonaccounting financial expertise, and total financial expertise. The results show that the coefficient on audit committee accounting expertise is negative and statistically significant, which rejects our null Hypothesis 1c. Furthermore, the coefficients on nonaccounting financial expertise and total financial expertise are not significantly different from zero. These results suggest that audit committee accounting expertise reduces the likelihood of CEO turnover after restatements, while nonaccounting financial expertise and total financial expertise do not. These results are consistent with the notion that the presence of accounting experts ameliorates concerns about restatements. Therefore, the CEO does not necessarily need to be held accountable for restatements. An alternative explanation could be that the accounting experts on the board would share some of the blame and hence reduce the penalty for the CEO. It is noted that we include *AAER* as another control variable in the *CEOTURN* regression and it loads as expected. That is, the SEC's enforcement action may contribute to CEO turnover subsequent to restatements. CEO duality (*CEO\_CHAIR*), *ROA*, and *DACCR* also load in the expected directions.

In Columns (7) and (8) of Table 3, we replace *CEOTURN* with *CFOTURN* and repeat the analysis. None of the coefficients are statistically different from zero. It appears that unlike CEO turnover, audit committee accounting expertise plays less of a role in determining CFO turnover.

### *Compensation Committee Expertise and Consequences of Restatements*

In Table 4, we use models similar to Model 1 and its variations to examine the accounting expertise of the compensation committee. First, *CAR* is regressed on compensation committee expertise after controlling for other governance variables, restatement variables, and firm characteristics. Columns (1) and (2) of Table 4 present these results, which are comparable to those reported earlier in Columns (1) and (2) of Table 3. Specifically, *COMPACC* has a coefficient of 0.023, which is not significantly different from zero. This result fails to reject our null Hypothesis 2a. On the contrary, compensation committee nonaccounting financial expertise and total financial expertise are significantly and negatively related to market reactions.

Similar to Columns (3) and (4) in Table 3, Columns (3) and (4) of Table 4 show the results of the logistic regression with *AAER* as the dependent variable. The results show that compensation committee accounting expertise (*COMPACC*) has no statistically significant relationship with *AAER*. Therefore, we cannot reject our null Hypothesis 2b. In contrast, nonaccounting financial expertise (*COMPNONACC*) has a significant and positive

**Table 3.** Audit Committee Financial Expertise and Restatement Consequences.

Variable	CAR		AAER		CEOTURN		CFOTURN	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
INTERCEPT	-0.085*** (0.033)	-0.088*** (0.033)	-5.280*** (0.841)	-4.985*** (0.821)	-1.432** (0.572)	-1.262** (0.563)	0.889 (0.559)	0.888 (0.559)
AUDITACC	0.046* (0.025)		-0.551 (0.775)		-0.900* (0.476)		-0.184 (0.451)	
AUDITNONACC	-0.016 (0.027)		2.166*** (0.654)		0.454 (0.424)		-0.192 (0.412)	
AUDITFIN		0.004 (0.025)		1.488** (0.628)		-0.014 (0.402)		-0.189 (0.395)
AAER					0.998*** (0.255)	1.096*** (0.253)	0.766*** (0.242)	0.765*** (0.240)
AUDIT_SIZE	0.011** (0.004)	0.010** (0.004)	-0.180 (0.118)	-0.183 (0.119)	0.014 (0.087)	0.023 (0.086)	-0.050 (0.089)	-0.050 (0.088)
BOARD_SIZE	0.001 (0.002)	0.001 (0.002)	-0.015 (0.051)	-0.027 (0.051)	0.001 (0.040)	-0.005 (0.040)	-0.026 (0.040)	-0.026 (0.040)
CEO_CHAIR	-0.008 (0.008)	-0.008 (0.008)	-0.158 (0.188)	-0.152 (0.185)	-0.645*** (0.146)	-0.621*** (0.145)	-0.123 (0.145)	-0.124 (0.145)
SELF	-0.007 (0.009)	-0.010 (0.009)	0.549*** (0.189)	0.632*** (0.187)	0.152 (0.152)	0.223 (0.150)	-0.009 (0.149)	-0.009 (0.149)
CORE	-0.007 (0.009)	-0.007 (0.009)	0.431** (0.212)	0.450** (0.210)	0.076 (0.157)	0.076 (0.156)	-0.132 (0.153)	-0.132 (0.153)
IMPACT	-0.103 (0.502)	-0.134 (0.502)	17.846*** (5.589)	18.147*** (5.521)	3.697 (5.592)	3.998 (5.604)	4.509 (5.894)	4.507 (5.893)
PERVASIVENESS	0.004 (0.003)	0.004 (0.003)	-0.091 (0.066)	-0.077 (0.064)	-0.023 (0.049)	-0.014 (0.049)	0.009 (0.052)	0.009 (0.052)
PERSISTENCY	0.005* (0.003)	0.005* (0.003)	0.077 (0.071)	0.075 (0.069)	0.034 (0.056)	0.034 (0.056)	-0.062 (0.059)	-0.062 (0.059)
SIZE	0.000 (0.003)	0.000 (0.003)	0.255*** (0.065)	0.248*** (0.065)	0.049 (0.053)	0.041 (0.053)	-0.127** (0.053)	-0.127** (0.053)
BTM	0.001 (0.010)	0.001 (0.010)	0.109 (0.161)	0.127 (0.158)	0.091 (0.138)	0.096 (0.136)	-0.112 (0.145)	-0.112 (0.145)
ROA	0.054 (0.041)	0.058 (0.041)	-1.690*** (0.367)	-1.722*** (0.358)	-0.705* (0.407)	-0.680* (0.402)	0.236 (0.402)	0.236 (0.402)
DACCR	-0.137* (0.075)	-0.146* (0.077)	2.167** (1.014)	2.485** (1.014)	2.063** (0.871)	2.185** (0.868)	0.495 (0.871)	0.494 (0.871)
Observations	1,322	1,322	1,329	1,329	1,033	1,033	946	946
Adjusted or Pseudo R <sup>2</sup>	.028	.021	.107	.075	.059	.047	.027	.027

This table presents results of regressing restatement consequences on audit committee financial expertise using Model 1.1 and Model 1.2. That is,

$$\begin{aligned} \text{Restatement Consequence} = & \beta_0 + \beta_1 \text{AUDITACC} + \beta_2 \text{AUDITNONACC} + \beta_3 \text{AUDIT\_SIZE} + \beta_4 \text{BOARD\_SIZE} \\ & + \beta_5 \text{CEO\_CHAIR} + \beta_6 \text{SELF} + \beta_7 \text{CORE} + \beta_8 \text{IMPACT} + \beta_9 \text{PERVASIVENESS} + \beta_{10} \text{PERSISTENCY} \\ & + \beta_{11} \text{SIZE} + \beta_{12} \text{BTM} + \beta_{13} \text{ROA} + \beta_{14} \text{DACCR} \end{aligned} \quad (1.1).$$

$$\begin{aligned} \text{Restatement Consequence} = & \beta_0 + \beta_1 \text{AUDITFIN} + \beta_2 \text{AUDIT\_SIZE} + \beta_3 \text{BOARD\_SIZE} + \beta_4 \text{CEO\_CHAIR} \\ & + \beta_5 \text{SELF} + \beta_6 \text{CORE} + \beta_7 \text{IMPACT} + \beta_8 \text{PERVASIVENESS} + \beta_9 \text{PERSISTENCY} + \beta_{10} \text{SIZE} \\ & + \beta_{11} \text{BTM} + \beta_{12} \text{ROA} + \beta_{13} \text{DACCR} \end{aligned} \quad (1.2).$$

Column (1)–(2) show the OLS regression results for stock returns, CAR. In Column (3) through Column (8), logistic regressions results are presented for AAER, CEOTURN, and CFOTURN, respectively. AAER is also included as an additional independent variable for CEOTURN and CFOTURN regressions. \*\*\*, \*\*, \* represent significance levels at the 1%, 5%, and 10% levels, respectively (two-tailed). Heteroscedasticity consistent standard errors are presented in brackets under coefficient estimates. For logistic regressions, the Pseudo R<sup>2</sup> is measured as the McFadden's likelihood ratio index. See Appendix for variable definitions.

**Table 4.** Compensation Committee Financial Expertise and Restatement Consequences.

Variable	CAR		AAER		CEOTURN		CFOTURN	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
INTERCEPT	-0.045*	-0.049*	-7.491***	-7.365***	-1.301**	-1.133**	0.935*	0.951*
	(0.027)	(0.027)	(0.783)	(0.782)	(0.510)	(0.502)	(0.504)	(0.503)
COMPACC	0.023		-0.532		-1.206**		-0.453	
	(0.026)		(0.820)		(0.566)		(0.502)	
COMPNONACC	-0.041**		1.120*		0.182		-0.262	
	(0.018)		(0.604)		(0.342)		(0.330)	
COMPFIN		-0.029*		0.823		-0.108		-0.304
		(0.017)		(0.591)		(0.319)		(0.312)
AAER					1.113***	1.133	0.768***	0.775***
					(0.258)	(0.257)	(0.246)	(0.245)
COMP_SIZE	0.003	0.004	-0.048	-0.074	0.008	-0.017	-0.007	-0.010
	(0.004)	(0.004)	(0.103)	(0.102)	(0.075)	(0.074)	(0.075)	(0.074)
BOARD_SIZE	0.002	0.002	-0.010	-0.004	-0.003	0.001	-0.038	-0.037
	(0.002)	(0.002)	(0.051)	(0.050)	(0.040)	(0.039)	(0.039)	(0.039)
CEO_CHAIR	-0.008	-0.007	-0.210	-0.223	-0.620***	-0.623***	-0.112	-0.114
	(0.008)	(0.008)	(0.191)	(0.191)	(0.145)	(0.144)	(0.145)	(0.144)
SELF	-0.007	-0.008	0.442**	0.494***	0.207	0.234	-0.010	-0.007
	(0.009)	(0.009)	(0.193)	(0.191)	(0.151)	(0.150)	(0.149)	(0.149)
CORE	-0.006	-0.007	0.350	0.386*	0.072	0.083	-0.125	-0.123
	(0.009)	(0.009)	(0.215)	(0.214)	(0.157)	(0.156)	(0.154)	(0.153)
IMPACT	-0.056	-0.102	16.111**	17.186***	2.728	3.878	4.716	4.808
	(0.498)	(0.500)	(5.643)	(5.630)	(5.632)	(5.619)	(5.906)	(5.901)
PERVASIVENESS	0.004	0.004	-0.070	-0.066	-0.021	-0.016	0.007	0.008
	(0.003)	(0.003)	(0.066)	(0.065)	(0.049)	(0.049)	(0.052)	(0.052)
PERSISTENCY	0.004	0.004	0.106	0.098	0.043	0.038	-0.072	-0.073
	(0.003)	(0.003)	(0.071)	(0.071)	(0.056)	(0.056)	(0.060)	(0.060)
SIZE	0.002	0.001	0.244***	0.246***	0.044	0.044	-0.134**	-0.133**
	(0.003)	(0.003)	(0.064)	(0.063)	(0.052)	(0.052)	(0.053)	(0.053)
BTM	0.000	0.000	0.116	0.121	0.106	0.101	-0.120	-0.121
	(0.010)	(0.010)	(0.157)	(0.156)	(0.136)	(0.135)	(0.144)	(0.144)
ROA	0.055	0.054	-1.527***	-1.485***	-0.797*	-0.690*	0.208	0.215
	(0.041)	(0.042)	(0.376)	(0.369)	(0.411)	(0.403)	(0.402)	(0.402)
DACCR	-0.138*	-0.140*	2.161**	2.210**	2.177**	2.203**	0.545	0.543
	(0.076)	(0.077)	(1.005)	(1.013)	(0.870)	(0.867)	(0.871)	(0.871)
Observations	1,320	1,320	1,327	1,327	1,031	1,031	944	944
Adjusted or Pseudo R <sup>2</sup>	.024	.021	.136	.129	.054	.049	.027	.027

This table presents results of regressing restatement consequences on COMP committee financial expertise using Model 2.1 and Model 2.2. That is,

$$\begin{aligned} \text{Restatement Consequence} = & \beta_0 + \beta_1 \text{COMPACC} + \beta_2 \text{COMPNONACC} + \beta_3 \text{COMP\_SIZE} + \beta_4 \text{BOARD\_SIZE} \\ & + \beta_5 \text{CEO\_CHAIR} + \beta_6 \text{SELF} + \beta_7 \text{CORE} + \beta_8 \text{IMPACT} + \beta_9 \text{PERVASIVENESS} + \beta_{10} \text{PERSISTENCY} \\ & + \beta_{11} \text{SIZE} + \beta_{12} \text{BTM} + \beta_{13} \text{ROA} + \beta_{14} \text{DACCR}. \end{aligned} \quad (2.1)$$

$$\begin{aligned} \text{Restatement Consequence} = & \beta_0 + \beta_1 \text{COMPFIN} + \beta_2 \text{COMP\_SIZE} + \beta_3 \text{BOARD\_SIZE} + \beta_4 \text{CEO\_CHAIR} \\ & + \beta_5 \text{SELF} + \beta_6 \text{CORE} + \beta_7 \text{IMPACT} + \beta_8 \text{PERVASIVENESS} + \beta_9 \text{PERSISTENCY} + \beta_{10} \text{SIZE} \\ & + \beta_{11} \text{BTM} + \beta_{12} \text{ROA} + \beta_{13} \text{DACCR}. \end{aligned} \quad (2.2)$$

Column (1)-(2) show the OLS regression results for stock returns, CAR. In Column (3) through Column (8), logistic regressions results are presented for AAER, CEOTURN, and CFOTURN respectively. AAER is also included as an additional independent variable for CEOTURN and CFOTURN regressions. \*\*\*, \*\*, \* represent significance levels at the 1%, 5%, and 10% levels, respectively (two-tailed). Heteroscedasticity consistent standard errors are presented in brackets under coefficient estimates. For logistic regressions, the Pseudo R<sup>2</sup> is measured as the McFadden's likelihood ratio index. See Appendix for variable definitions.

association to AAER, suggesting that nonaccounting financial experts worsen the negative consequences of restatements.

Columns (5) and (6) of Table 4 show the results of the logistic regression of CEO turnover on compensation committee characteristics. The results show that the coefficient of the accounting expertise on the compensation committee is significantly negative, indicating that such expertise would reduce the probability of CEO turnover. This suggests that the presence of an accounting expert on the compensation committee may explain the occurrence of a restatement without any specific blame on the CEO. Overall, the presence of accounting experts on compensation committees can help CEOs retain their jobs. This result rejects our null Hypothesis 2c. In contrast, the coefficients on nonaccounting financial expertise and total financial expertise of the compensation committee are both statistically insignificant. Columns (7) and (8) of Table 4 present the results for CFO turnover. Again, similar to the results for the audit committee, we do not see significant results for CFO turnover, indicating that compensation committee accounting expertise does not have a significant effect on CFO turnover post-restatement.

### *Effect of SOX of 2002*

As our sample spans over one of the most significant changes in securities regulation—the SOX of 2002, we examine the effect of SOX, if any, on the association between board committee accounting expertise and restatement consequences.<sup>16</sup> Burks (2011) shows that while there was a surge in the number of restatements right after SOX Section 404 came into effect, overall market reactions became less negative after SOX. In order to study if SOX changes the role of accounting expertise in mitigating restatement consequences, we add a dummy variable SOX and its interaction with expertise variables in Model 1 and its variations.

Table 5 Panel A presents the results of Model 3.1 on the audit committee. Column (1) shows that the positive moderating effect of audit committee accounting expertise on market reactions remains using the new model specification, with a coefficient of 0.131 on *AUDITACC*. The coefficient on *SOX* is positive and statistically significant, indicating less negative reactions to restatement announcements after SOX. The interactive term between *SOX* and *AUDITACC* has a negative and statistically significant coefficient, indicating that in post-SOX period there has been a decline in the moderating effect of the audit committee accounting expertise. The net effect of accounting expertise of audit committees in the post-SOX period, represented by the sum of the two coefficients ( $AUDITACC + SOX * AUDITACC = 0.131 - 0.113$ ), is 0.018 with an *F*-statistic of 0.8 (*p* value of .372), and hence is not statistically significant. In untabulated results, our inferences from using separate estimations for the pre-SOX and post-SOX periods remain unchanged.

There are two potential explanations for why from a shareholder perspective the moderating effect of accounting expertise may have weakened in the post-SOX period. First, the market reaction to restatements themselves has become less negative in the post-SOX era. As a result, the cross-sectional variation across sample firms has declined. Second, the market's expectation of the composition of audit committees has changed. Prior to SOX, investors did not expect firms to hire an accounting expert on the committees because there was no such regulatory requirement in effect. Hence, investors in this era might have rewarded (penalized less) restating firms with more accounting expertise on board upon announcing a restatement, thereby supporting our hypothesis. Consequent to SOX and the ensuing regulations, the norm and hence investor expectation has changed to one where firms usually

**Table 5.** Accounting Expertise and Restatement Consequences Before and After the Sarbanes–Oxley Act.

Variable	CAR (1)	AAER (2)	CEOTURN (3)	CFOTURN (4)
INTERCEPT	−0.131*** (0.025)	−2.956*** (0.495)	−0.962** (0.409)	1.217*** (0.431)
AUDITACC	0.131** (0.062)	−0.531 (0.924)	−0.758 (1.202)	−2.678** (1.137)
SOX	0.090*** (0.017)	−1.353*** (0.245)	−0.131 (0.246)	−0.954*** (0.239)
SOX × AUDITACC	−0.113* (0.064)	−1.791 (1.144)	−0.474 (1.258)	3.121*** (1.189)
AAER			0.974*** (0.259)	0.596** (0.251)
AUDIT_SIZE	0.006 (0.004)	−0.141 (0.116)	0.007 (0.086)	−0.007 (0.089)
BOARD_SIZE	0.001 (0.002)	−0.028 (0.051)	−0.003 (0.040)	−0.023 (0.040)
CEO_CHAIR	−0.004 (0.008)	−0.341* (0.194)	−0.661*** (0.146)	−0.136 (0.146)
SELF	−0.014 (0.009)	0.774*** (0.196)	0.182 (0.153)	0.054 (0.151)
CORE	−0.003 (0.009)	0.342 (0.215)	0.064 (0.158)	−0.178 (0.155)
IMPACT	−0.177 (0.504)	20.193*** (5.688)	3.966 (5.591)	5.000 (5.948)
PERVASIVENESS	0.001 (0.003)	−0.041 (0.066)	−0.020 (0.050)	0.033 (0.052)
PERSISTENCY	0.002 (0.003)	0.136* (0.073)	0.039 (0.056)	−0.038 (0.060)
SIZE	−0.002 (0.003)	0.315*** (0.066)	0.060 (0.053)	−0.124** (0.053)
BTM	0.002 (0.010)	0.004 (0.154)	0.077 (0.136)	−0.121 (0.145)
ROA	0.049 (0.040)	−1.602*** (0.376)	−0.684* (0.409)	0.166 (0.407)
DACCR	−0.115 (0.074)	1.344 (0.985)	1.973** (0.870)	0.488 (0.883)
Observations	1,322	1,329	1,033	946
Adjusted or Pseudo R <sup>2</sup>	.065	.147	.059	.041

Panel A: Audit committee accounting expertise and restatement consequences: before and after SOX. Panel A reports regression results of Model 3.1.

$$\begin{aligned}
 \text{Restatement Consequence} = & \beta_0 + \beta_1 \text{AUDITACC} + \beta_2 \text{SOX} + \beta_3 \text{SOX} * \text{AUDITACC} + \beta_4 \text{AUDIT\_SIZE} \\
 & + \beta_5 \text{BOARD\_SIZE} + \beta_6 \text{CEO\_CHAIR} + \beta_7 \text{SELF} + \beta_8 \text{CORE} + \beta_9 \text{IMPACT} + \beta_{10} \text{PERVASIVENESS} \\
 & + \beta_{11} \text{PERSISTENCY} + \beta_{12} \text{SIZE} + \beta_{13} \text{BTM} + \beta_{14} \text{ROA} + \beta_{15} \text{DACCR} \dots
 \end{aligned} \tag{3.1}$$

Column (1) shows the OLS regression results for stock returns, CAR. In Column (2) through Column (4), logistic regressions results are presented for AAER, CEOTURN, and CFOTURN respectively. AAER is also included as an additional independent variable for CEOTURN and CFOTURN regressions. \*\*\*, \*\*, \* represent significance levels at the 1%, 5%, and 10% levels, respectively (two-tailed). Heteroscedasticity consistent standard errors are presented in brackets under coefficient estimates. For logistic regressions, the Pseudo R<sup>2</sup> is measured as the McFadden's likelihood ratio index. See Appendix for variable definitions. Panel B: Compensation committee accounting expertise and restatement consequences: before and after SOX.

(continued)

**Table 5.** (continued)

Variable	CAR (1)	AAER (2)	CEOTURN (3)	CFOTURN (4)
INTERCEPT	-0.122*** (0.025)	-3.038*** (0.492)	-1.015** (0.399)	1.104*** (0.419)
COMPACC	0.135 (0.093)	0.674 (1.050)	-0.317 (1.272)	-2.534* (1.415)
SOX	0.089*** (0.016)	-1.633*** (0.231)	-0.210 (0.230)	-0.744*** (0.213)
SOX*COMPACC	-0.129 (0.098)	-1.028 (1.356)	-1.179 (1.404)	2.741* (1.504)
AAER			1.035*** (0.259)	0.602** (0.249)
COMP_SIZE	0.005 (0.004)	-0.193** (0.103)	-0.001 (0.071)	-0.005 (0.072)
BOARD_SIZE	0.002 (0.002)	-0.017 (0.051)	-0.005 (0.040)	-0.023 (0.039)
CEO_CHAIR	-0.004 (0.008)	-0.341** (0.193)	-0.626*** (0.145)	-0.144 (0.146)
SELF	-0.015* (0.009)	0.826*** (0.195)	0.235 (0.152)	0.039 (0.150)
CORE	-0.003 (0.009)	0.365* (0.215)	0.064 (0.157)	-0.188 (0.155)
IMPACT	-0.141 (0.499)	20.315*** (5.710)	3.224 (5.623)	4.455 (5.936)
PERVASIVENESS	0.001 (0.003)	-0.028 (0.065)	-0.015 (0.050)	0.028 (0.052)
PERSISTENCY	0.002 (0.003)	0.141** (0.072)	0.044 (0.056)	-0.039 (0.060)
SIZE	-0.002 (0.003)	0.311*** (0.065)	0.053 (0.053)	-0.123** (0.053)
BTM	0.002 (0.010)	0.042 (0.154)	0.108 (0.136)	-0.133 (0.144)
ROA	0.055 (0.041)	-1.596*** (0.380)	-0.749* (0.416)	0.146 (0.408)
DACCR	-0.116 (0.074)	1.403 (0.983)	2.112** (0.870)	0.424 (0.877)
Observations	1,320	1,327	1,031	944
Adjusted or Pseudo R <sup>2</sup>	.063	.135	.054	.037

Panel B reports regression results of Model 3.2.

$$\begin{aligned} \text{Restatement Consequence} = & \beta_0 + \beta_1 \text{COMPACC} + \beta_2 \text{SOX} + \beta_3 \text{SOX*COMPACC} + \beta_4 \text{COMP\_SIZE} + \\ & \beta_5 \text{BOARD\_SIZE} + \beta_6 \text{CEO\_CHAIR} + \beta_7 \text{SELF} + \beta_8 \text{CORE} + \beta_9 \text{IMPACT} + \beta_{10} \text{PERVASIVENESS} + \\ & \beta_{11} \text{PERSISTENCY} + \beta_{12} \text{SIZE} + \beta_{13} \text{BTM} + \beta_{14} \text{ROA} + \beta_{15} \text{DACCR} \end{aligned} \quad (3.2)$$

Column (1) shows the OLS regression results for stock returns, CAR. In Column (2) through Column (4), logistic regressions results are presented for AAER, CEOTURN, and CFOTURN respectively. AAER is also included as an additional independent variable for CEOTURN and CFOTURN regressions. \*\*\*, \*\*, \* represent significance levels at the 1%, 5%, and 10% levels, respectively (two-tailed). Heteroscedasticity consistent standard errors are presented in brackets under coefficient estimates. For logistic regressions, the Pseudo R<sup>2</sup> is measured as the McFadden's likelihood ratio index. See Appendix for variable definitions.

hire accounting experts on the board and hence investors incorporate this in their pricing. When these experts are on board and restatements still occur, the negative market response is worse because investors do not expect restatements in the presence of accounting experts. Thus, while there are channels, as discussed in our hypothesis development section, through which accounting experts can and do continue to mitigate the negative market response to restatements in general, in the post-SOX era, their effects appear to be offset by the changed market expectations. In Column (2), for *AAER*, the negative coefficient on *AUDITACC* is insignificantly different from zero, as in Table 3, while the coefficient on *SOX* is negative and statistically significant. This shows that post-SOX restatements are less likely to lead to *AAER*. The interactive term between *SOX* and *AUDITACC* has a negative, yet statistically insignificant coefficient. For the CEO turnover results in Column (3), we do not find any significant results on the variables of interest. However, in Column (4) for CFO turnover, in this new model specification, we now observe a negative main effect of *AUDITACC* and *SOX*, while the coefficient on the interactive term is positive and statistically significant. This may indicate a change in the moderating effect of *AUDITACC* on CFO turnover post-SOX.

The results in Panel B, Table 5 are about the same as those shown in Table 4. That is, the moderating effects of compensation committee accounting expertise are qualitatively similar to those shown in our main analysis, while some changes are observed after SOX. Overall, these results suggest that while SOX has resulted in less severe consequences to restatements, the moderating effects of the accounting expertise on the audit and compensation committees continue to be qualitatively similar to those documented in our primary analysis.<sup>17</sup>

### **Additional Analyses**

We perform additional tests to assess robustness of the preceding results. First, we re-examine the market response to restatements by replacing abnormal returns with excess returns measured as cumulative stock returns over the event window less the cumulative market returns, and find no discernible differences. We also repeat all of the analyses using market returns over a shorter window (3-day *CAR*) and find that results are qualitatively similar to our primary results. In addition, we compare the effects of accounting expertise of the audit committee and compensation committee on the consequences of restatements by including both committees' characteristics in the same regression. We find that the effects of audit committee are more significant than those of compensation committee, reaffirming our finding that audit committee accounting expertise has the most effect in mitigating the negative consequences of restatements.

### **Conclusion**

In this article, we examine both short-term and long-term effects of different financial expertise of two board committees: audit and compensation. Our results, consistent with our expectations, show that accounting expertise on audit committees mitigates the negative stock market reaction to restatements and lowers the incidence of *AAERs*. On the other hand, nonaccounting financial expertise on the audit committee exacerbates the negative stock market reaction and increases the probability of *AAERs* and CEO turnover. In addition, we find that accounting expertise on the compensation committee also mitigates the negative stock market reaction to restatements and reduces the probability of CEO

turnover. Nonaccounting financial expertise on the compensation committee, in contrast, increases the probability of SEC enforcement actions against restating firms and increases the negative stock market reaction to restatements. We also document that the mitigating effect of accounting expertise are offset by the changed investor expectations due to regulatory requirements, resulting in statistically insignificant results for the post-SOX period.<sup>18</sup> From a regulatory perspective, these results show how regulation can change market expectations, and that an “unintended” consequence is the apparent off-setting of the original intent of the regulation. Indeed, in light of the differential results in the pre-SOX versus post-SOX era, we view our results as confirmatory justification for the regulatory intervention. To the best of our knowledge, these results are novel and have not been documented in prior research. The results also complement the analytical papers (e.g., Caskey et al., 2010; Caskey & Laux, 2017) by validating their theoretical predictions.

Our results are subject to some caveats. First, we do not account for audit committee independence. However, given Romano’s (2005) finding that 10 of the 12 studies she examined found no benefit from this, the omission is unlikely to have an effect on our results. Second, our focus on restatement firms subject to AAERs represents restatements that the SEC detected and deemed materially significant. To the extent that the sample depends on SEC enforcement strategies, our results may be biased. Third, we focus only on the accounting expertise of committee members, rather than the board as a whole, and some firms in our sample had directors with accounting expertise on the board who were not on either the audit or compensation committees. This omission would of course, bias against our findings. Finally, given the absence of a well-developed literature on the theory of how accounting expertise relative to nonaccounting financial expertise may specifically influence corporate governance, we view our results as empirical regularities that are consistent with intuition.<sup>19</sup>

Despite these caveats, our results highlight the importance of accounting expertise among audit and compensation committee members. Indeed, a potential policy implication of our results is that the SEC might consider requiring firms to have at least one accounting expert each on both the audit and the compensation committee. Moreover, while SOX requires companies to disclose whether they have at least one financial expert on their audit committees, the definition of financial expertise is left open.<sup>20</sup> Our findings that accounting and nonaccounting financial expertise of board committees have different effects also highlight the importance of clearly defining what constitutes financial expertise. In sum, there are channels through which accounting expertise of board committees influence both short-term and long-term consequences of firm actions. This is an especially important finding, considering recent regulation on the qualifications of audit committee members (Coates et al., 2007).



**Appendix.** Variable definitions.

Variable	Definition
CAR	Cumulative abnormal return measured over 11 days (5 days before through 5 days after) surrounding restatement announcement; calculated as the firm's cumulative stock return over the event window minus a normal return calculated using the market model, $\alpha + \beta \times \text{Market Return}$ , where $\alpha$ and $\beta$ for each firm are estimated using daily returns over a 1-year period ending 30 days before the restatement announcements
AAER	Indicator variable equal to 1 if the company is subject to an SEC accounting and auditing enforcement action and 0 otherwise
CEOTURN	Indicator variable that is equal to 1 if the company experienced CEO turnover in the year of restatement announcement or in the following year and 0 otherwise
CFOTURN	Indicator variable that is equal to 1 if the company experienced CFO turnover in the year of restatement announcement or in the following year and 0 otherwise
AUDITACC	Percentage of audit committee members with accounting expertise out of total number of directors on the audit committee
AUDITNONACC	Percentage of audit committee members with nonaccounting financial expertise out of total number of directors on the audit committee
AUDITFIN	Percentage of audit committee members with financial expertise out of total number of directors on the audit committee
COMPACC	Percentage of compensation committee members with accounting expertise out of total number of directors on the compensation committee
COMPNONACC	Percentage of compensation committee members with nonaccounting financial expertise out of total number of directors on the compensation committee
COMPFIN	Percentage of compensation committee members with financial expertise out of total number of directors on the compensation committee
AUDIT_SIZE	Total number of audit committee directors
COMP_SIZE	Total number of compensation committee directors
BOARD_SIZE	Total number of directors
CEO_CHAIR	Indicator variable equal to 1 if CEO is also Chairman and 0 otherwise
SELF	Indicator variable equal to 1 if the company initiated the restatement and 0 otherwise
CORE	Indicator variable equal to 1 if the restatement involves revenue and cost/expense and 0 otherwise
IMPACT	Financial statement impact of the restatement, calculated as $(\text{cumulative effect of restatements}/\text{number of years in restatement period})/\text{prior period total assets}$
PERVASIVENESS	Pervasiveness of the restatement, measured as the number of accounts affected
PERSISTENCY	Persistency of the restatement, measured as the number of years involved in the restatement
SIZE	Natural logarithm of sales
BTM	Book-to-market ratio
DACCR	Performance-matched discretionary accruals, constructed following Kothari et al. (2005)
ROA	Return on assets calculated as $(\text{net income}/\text{assets})$
SOX	Indicator variable that is equal to 1 if restatement is filed after July 2002 and 0 otherwise

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## Notes

1. The authors thank the reviewer for pointing this out and suggesting this additional test.
2. The authors are thankful to the anonymous reviewer for this suggestion.
3. Following SEC, the NYSE issued Section 303A.07 regarding qualified audit committees. The requirements include (a) each member must be financially literate, as interpreted by the listed company's board in its business judgment, or become financially literate within a reasonable period of time after appointment, and (b) at least one member must have accounting or related financial management expertise, again as interpreted the listed company's board interprets such qualifications.
4. For example, companies with greater audit committee financial expertise experience greater accounting conservatism (Krishnan & Visvanathan, 2008), decreased earnings management (Bedard et al., 2004; Dhaliwal et al., 2010), fewer restatements (Abbott et al., 2004), and fewer material internal control weaknesses (Krishnan, 2005).
5. We discussed our research idea with a chief accounting officer of a public company and an audit partner who provided us with the anecdotal evidence.
6. For example, Salix Pharmaceuticals first announced a revenue recognition problem in November 2014. The audit committee then initiated an internal investigation (Hoffman & Rockoff, 2014). The company restated revenue for 2013 and the first three quarters of 2014 by \$20.7 million in January 2015. The company's chairman was quoted as follows: "While in total the restatements are minor in scale, the Audit Committee takes these matters very seriously and is in the process of promptly enhancing controls and procedures to ensure this never happens again." (Bloomberg Business, "Salix to restate seven quarters after audit committee report" [by Drew Armstrong], January 5, 2015).
7. For instance, Waste Management's accounting scandal was first uncovered by the audit committee after *Roderick Hills*, a former SEC chairman, became the chairman of the audit committee in 1997. The SEC investigation started after the audit committee publicized its discovery of accounting fraud committed by the former CEO and CFO.

8. We state our hypotheses in the null form because there are counterarguments that suggest accounting experts on audit committee may not be able to mitigate negative consequences of financial restatements. First, since restatements occur even in the presence of accounting specialists, these board members may not be true expert, or they may be ineffective. Thus the market reaction to restatements may not differ between corporations with and without accounting experts on their audit or compensation committees. Second, accounting experts know the subtle differences between errors that require restatements and those that do not. Therefore, restatements in their presence may be judged more serious, and the market reaction will be even more negative. Third, the presence of an accounting expert can lead other board members to slack off. If the expert is an ineffective monitor, the board or audit committee may end up being less effective.
9. The actual number of observations varies depending on the dependent variable and the availability of some of the control variables. See Table 3 for details.
10. For observations with an announcement day falling on a nontrading day, we use the first trading day after the announcement as the event date.
11. We note that CAR, a measure of the market reaction to financial restatements, declined during the later years of the sample period, largely after the enactment of SOX, which is consistent with Scholz (2008). In untabulated robustness checks, we also use excess return, defined as firm cumulative return minus market cumulative return, instead of the CAR and obtain similar results. Karpoff et al. (2017) show that the event dates identified in commonly used database for financial misconduct research are often different from the dates revealed from the SEC 13(b) enforcement data, which lead to understatement of market reactions. More specifically, Karpoff et al. (2017) report that the median delay in the GAO database is 6 days. To mitigate this measurement issue, we choose 11 days, a longer window, to better capture market reactions. Alternatively, in a robustness check, we also measure CAR over the 3-day window surrounding the event dates and find qualitatively similar results.
12. In this way, a nonaccounting financial expert definitely has no accounting expertise. For instance, if a director has been CFO and then becomes a CEO, this director will be coded as an accounting expert. By doing so, we differentiate between a CEO who used to be a CFO vs. a CEO who used to be a COO or attorney. This coding procedure is consistent with our interest in the differential roles of accounting and nonaccounting experts and this approach to the classification is more restrictive and hence more likely to bias against our finding.
13. The authors thank the referee for making this suggestion.
14. The negative market reactions are smaller than those documented by Palmrose and Scholz (2004), mainly because this study covers a longer time period than Palmrose and Scholz (2004). Restatements in the GAO database have an average market reaction of  $-5\%$ , whereas market reactions are less severe in more recent years.
15. These results are consistent with our univariate results which remain untabulated for the sake of brevity.
16. The authors thank an anonymous referee for suggesting this analysis.
17. In general, the post-SOX period has weaker negative consequences, largely because they have more accounting experts as a result of SOX. This is consistent with SEC's intended goals and our prediction: more accounting experts leading to less negative consequences. Interestingly, researchers focusing solely on the post-SOX period, may therefore find it more difficult to detect the effects of accounting experts.
18. Empirically, we are unable to capture that effect because of the difficulty of measuring changed investor expectations that offset it.
19. The authors thank an anonymous referee for bringing this to our attention.
20. Currently, the requirements for an audit-committee financial expert does not necessarily demand accounting literacy, as financial executives with no accounting experience can be designated as that expert.

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